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The Wheat Stem Sawfly Situation in Manitoba, Saskatchewan, and Alberta for 1942

Many millions of bushels of wheat were lost on western Canadian farms in 1941 by the ravages of the wheat stem sawfly (*Cephus cinctus* Nort.)

Plans must be made immediately to start sawfly control on infested farms. No farmer who suffered loss in 1941 should continue farming without recognizing the problem and taking steps to reduce the loss caused by this insect.

This pest attacks all varieties of wheat as well as spring and fall rye. There are some varieties of wheat which are somewhat resistant to attack, but *all* the commonly grown hard spring wheats are very susceptible to attack. A crop that is in the "boot" stage during the last half of June is likely to be infested.

The eggs are hidden inside the wheat stem and larvae spend their entire development period inside the stem.

Recognize Damage by the Wheat Stem Sawfly

The larva or "grub" of the sawfly feeds inside the stem of the wheat plant from early July until just before the wheat is ready to cut. At this time the larva girdles the stem from the inside just above the soil surface. The stem eventually breaks off at that point and falls to the ground. Before this happens the presence of larvae in a crop may be detected by splitting a few stems. Those infested will be found to be full of fine dust, and if split for the full length, the larva itself may be found.

Examine the Map on the Next Page

The coloured areas show the portions of Manitoba, Saskatchewan and Alberta where wheat stem sawfly is now or has recently been a serious pest of wheat.

The Wheat Stem Sawfly and Strip Farming

Strip farming as a control for soil drifting has been adopted in many districts throughout the western Canadian plains. On many of these stripped farms the sawfly problem has now become very acute. The lack of timely control measures has resulted in such an increase of the pest that disastrous losses occur annually.

This type of cultivation provides ideal conditions for rapid increase of wheat stem sawfly. Control is more difficult because of the number of margins exposed and their proximity to the source of infestation. Carefully planned and properly executed control programs are an *urgent necessity* in these areas if losses are to be reduced.

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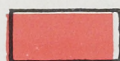
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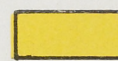
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LETHBRIDGE, ALBERTA

AREA AND RELATIVE INTENSITY OF INFESTATION OF WHEAT STEM SAWFLY

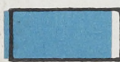
EXPECTED IN MANITOBA, SASKATCHEWAN AND ALBERTA IN 1942



Infestation severe. Heavy losses expected.



Infestations light.



Infestation generally moderate, but severe infestations present in some localities.
(Note. In southeastern Saskatchewan, weather has reduced the infestation for the present. More severe damage likely in future.)



Sawfly present. Little or no economic loss expected.

--- Brome grass grows satisfactorily outside this line; inside the line some difficulty is encountered in establishing brome grass except in wet seasons.

CONTROL MEASURES

1. Avoid "stubbling-in" wheat on any sawfly-infested field.
2. Protect wheat fields adjacent to an infested field with a trap crop.
3. All traps must be cut for hay between July 10 and 20.
4. Seed immune crops, such as oats, barley or flax, on severely infested parts of farm.
5. Plan to start harvesting infested fields before the crop is cut by the sawflies.
6. *On Stripped Farms*
 - (a) Establish a trap strip of brome grass around the entire farm, preferably on the headlands and in the road allowances.
 - (b) Farms with narrow strips which are very severely infested should be planted to oats, barley or flax to eliminate the sawfly from as much of the farm as possible.
 - (c) Temporary bare-strip traps of wheat seeded 10 to 12 days earlier than the crops should be established between the stubble and the summer-fallow wheat. Spring rye seeded at the same time or 2 or 3 days after seeding is also satisfactory. (Note. The width of the trap should be determined by the severity of the infestation and the widths of the implements on the individual farm. In general, 10- to 20-foot traps have been found to give satisfactory control.
 - (d) In areas where early frosts seldom occur, seeding of wheat *after May 20* will greatly reduce the sawfly infestation. Late-seeded crops are not sufficiently advanced to receive the sawfly eggs.
7. *Grow more coarse grains.* Because of the increased demand for more coarse grains, severely infested wheat land should be seeded to those crops. Such a program will greatly reduce the sawfly hazard at a time when there is a demand for oats and barley as live stock feed.

For detailed information on wheat stem sawfly see War-time Production Series pamphlet No. 59, Dominion Department of Agriculture, Ottawa, or write to the Dominion Entomological Laboratory at Lethbridge, Alberta; Saskatoon, Saskatchewan; or Brandon, Manitoba; or to the Department of Agriculture at Edmonton, Alberta; Regina, Saskatchewan; or Winnipeg, Manitoba.